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### Special interests and inclusive academic learning

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## **Special interests and inclusive academic learning: an autistic perspective**

### **Abstract**

**Purpose** - Many people with an autistic spectrum condition have one or more 'special interests' which is more restricted, and which they pursue with more than average intensity. The purpose of this paper is to offer a first-person perspective on inclusion of special interests in academic learning. The paper describes examples of special interests of university students and offers recommendations for university teachers.

**Design/methodology/approach** - The author combines the emerging strategy of using his own autobiographical material as research object with the more established method of conceptual analysis.

**Findings** - The author finds that special interests can be a source of academic strength, but can also interfere with learning. The paper argues that including special interests in academic learning is an effective way of including students with autism in higher education, but requires some special provisions.

**Originality/value** - Existing research has focussed either on the special interests of persons with autism or on their inclusion in education, but the combination of these two issues has rarely been considered. The paper addresses this neglected topic from the inside perspective of a former student with autism who, after completing a Research Master's in philosophy, was diagnosed with Asperger's Syndrome at age 34. The author combines this inside perspective with knowledge of the theory and history of autism.

**Keywords** - Autism Spectrum Disorders, Autism Spectrum Conditions, Asperger's Syndrome, Inclusive Education, Special interests, Circumscribed interests, Restricted interests, University Students

**Paper type** - Viewpoint

## Introduction

Autistic Spectrum Conditions ('autism') involve an atypical development that presents early in childhood and lasts through life. Autism affects social interaction, language use, sensory sensitivity, behavioural repertoire and the content and intensity of interests.

The DSM-V (APA, 2013) classifies autism as a neurodevelopmental *disorder*, defined by a concurrence of both "persistent deficits in social communication and social interaction" and "restricted, repetitive patterns of behaviour, interests, or activities". This medical definition is contested by individuals with autism and others, who believe that autism is not a biomedical disorder but a social construct (e.g. Runswick-Cole, 2016). In line with this social view, the term Autistic Spectrum Conditions (Kenny, *et al.*, 2015) is preferred here, for which 'autism' and 'autistic' will serve as shorthands. In addition, the term 'special interest' (Asperger, 1944) is preferred for interests that are atypical in content, pursued with more than average intensity, and enhancing performance while diminishing impairments. Even though the DSM-V uses the term 'restricted interests', 'special interests' is the term most widely used in academic publications, and preferred by persons with autism (Jordan & Caldwell-Harris, 2012).

Since the inclusion of Asperger's Syndrome (AS) as an Autistic Spectrum Condition (APA, 1994), at least 38 percent of individuals diagnosed with autism have an average or above average intelligence (Baio, 2012). Of this group, an increasing number are attending a college or university (White *et al.*, 2011). Protected by disability laws, these students with autism are eligible for adjustments in academic learning. Facilitating students with autism to obtain a university degree can greatly contribute to their quality of life, bring interesting and valuable work opportunities within reach, and can improve financial independence; not to forget the positive effects the presence of students with autism within the academic community can have on other students (Hart *et al.*, 2012).

As part of a wider development to include the first-person experiences of students with autism (Prince-Hughes, 2002; Schlabach, 2008; Carranza, 2017; Ward & Webster, 2017), the aim of this paper is to offer the inside perspective of an student with autism from the Netherlands. Where most literature on students with autism focusses on social difficulties and student life this paper draws attention to the positive potential of special interests for academic learning. Moreover, most authors focus on the early years at college, and especially the transition from high school to college, and do not address the Master's stage (Palmer 2006, ch. 9). However, the Master's level can also pose a challenge, as the structure provided by coursework falls away and students have to plan and organize their own research on their own, with minimal

supervision, and have to write a lengthier thesis. Therefore, this paper focuses on the Master's level.

Methodologically, the author has adopted the emerging research strategy of using his own autobiographical material as research object (Soong et. al., 2015; Tenni, Smith & Boucher). Such an approach has the advantage that it allows the researcher to work on topics that are not or insufficiently covered in existing autobiographies. Its limitations are that the researcher is not 'blind' to the goal of the research and can be reluctant to share failures.

This strategy has not been previously applied in autism studies, and adds a new twist to the more established strategy of analysing the autobiographies of persons with autism (Happé, 1991; Chamak et. al., 2008; Hacking, 2009; Davidson & Smith, 2009). On the one hand, analyses of autobiographies can offer valuable new insights, as they involve much richer descriptions than the succinct examples typically discussed in academic publications. On the other hand, this strategy has limitations: memory is known to be unreliable, and personal experiences cannot simply be generalized to all persons with autism.

To balance their respective weaknesses, the personal reflection was evaluated against a conceptual analysis of the academic literature on special interests – what philosopher Paul Ricoeur (1991, p. 16) calls “a detour of reflection by way of analysis”. In itself, conceptual analysis has the limitation that it may reproduce the prevailing understanding of special interests, rather than enriching our understanding of them.

The paper starts with a discussion of the relevance of special interests in the context of academics, followed by concrete examples of special interests in college/university students, and a series of recommendations to university teachers for including special interests in academic learning.

### **Special interest in the context of academic learning**

Despite the emerging interest in the inclusion of university students with autism, there is a paucity of research focussed on their learning style and preferences. Educational research focusing on autism foregrounds social and communication issues rather than strengths and weaknesses in academic learning per se (Altman, 2010; Colclough, 2016; Eckhardt, 2017; Glennon, 2001; VanBergeijk et. al. 2008; White et. al., 2011). However, another feature of autism that may affect academic learning is special interests, which can interfere with learning, but which can also enhance performance. For example, former student Douglas O'Neill his lifelong special interest in astronomy has resulted in a Ph.D. in the subject, as he

puts it: “an obsessive youthful interest becoming a lifelong passion” (Prince-Hughes 2002, p.85).

Studies that do address academic learning point to difficulties with executive functioning, such as planning, and organisation (Adreon & Durocher, 2007; Cai & Richdale, 2016) In so doing, they reflect the medical model of disability, which points to the impairments of students with autism as the cause of their problems. In contrast, this paper adopts the social model, which emphasizes that it depends on societal arrangements whether autism is a problem. With some adjustments to academic practice, special interests are one of the strengths of students with autism, and tapping into this strength can be an effective way of supporting their inclusion in higher education. Special interests were already described in the first two papers on autism. The mother of one of his patients with autism told Leo Kanner that her son was always “absorbed in some kind of silly, unrelated subject”. Hans Asperger (1944, p. 16, 39 & 62) put more emphasis on the phenomenon and observed special interests in several of the cases he described: Fritz had a “special interest” in numbers and calculations, Hellmuth was “mostly interested” in poetry, and another child had “most of all technical interests”.

Nonetheless, it would take until the 1990’s for the first studies to appear that specifically and substantially addressed special interests as a topic in its own right. Since then, several studies have addressed the possibility of using special interests to foster formal learning, but only in children under 18 (Adams, 1998; Winter-Messiers, 2007; Brown & Stanton-Chapman, 2015; Diener *et. al.*, 2015; El Zein *et. al.* 2016; Gunn & Delafield-Butt, 2016). The few studies that have addressed the special interests of adults with autism (O’Leary, 2011; Armstrong, 2014; Grove *et. al.*, 2018) have not focused on formal learning.

One of the reasons that special interests have been overlooked in higher education is a poor understanding of the defining features of special interests. First, they have a reputation of revolving around a topic that is highly *restricted* in scope. There is, however, little empirical evidence for this widely held assumption, as the author has found only one study evidencing that special interests may be more restricted in scope (Jordan & Caldwell-Harris, 2012, p. 398). Even if special interest are restricted, this may only be the case for children with autism who have less than average intelligence. Since most research has focussed on this group, it is poorly understood how intelligence, age and level of education affect special interests.

Second, it is widely assumed that the *topic* of special interests is most likely to fall within the domain of ‘folk physics’, supposedly because this sits best with being better in understanding systems than in social and emotional cognition (Baron-Cohen & Wheelwright, 1999; Klin *et. al.*, 2007). However, this view is not uncontested, as women tend have interests in different

domains, and special interests may also fall in the domain of the social sciences (Aday, 2011, p.113; Jordan and Caldwell-Harris, 2012).

Third, special interests are wrongly assumed to be *obsessive*. Even though persons with autism may experience special interest as an ‘addiction’, they do not feel that they are unwanted or distressful (Baron-Cohen, 1989), as is the case in obsessive-compulsive conditions. Rather, they are a source of pleasure.

This poor understanding of the defining features of special interest is reflected by the fact that scholars use over 70 different term variants to describe such interests. By analysing the salience of these terms in 80 academic papers focussing on the subject, the author has found that ‘special interests’ is the most salient term, rather than ‘circumscribed’ and ‘restricted’ interests, or ‘obsessions’.

The value of special interests to higher education becomes more clear when it is recognized that their defining features is an intrinsically motivation to know all there is to know about a subject without regard for the social or practical contexts in which it is embedded.

In a rare study focussing on special interests in so-called ‘high-functioning’ adults, Aday (2011, p. 112) found that 85% of a sample of 150 reported one or more special interests; of this group, 90% pursued their interest(s) daily, and 35% for six hours a day. A larger and more recent study found that 65% of a sample of 687 adults with autism reported at least one special interest; 56% of the sample pursued their special interest(s) every day, for 0-2 hours by 31% and for 2-4 hours by 37% (Grove *et. al.*, 2018, p. 4).

This motivation to pursue their interests with vigour and persistence can positively affect learning. Cai and Richdale (2015) found that students with autism can be organized and plan in areas that interest them, but are unable to plan for other areas in their lives. Similarly, Darius, a student with Asperger’s declared: “I had extremely good memory and concentration for things that interested me, but none at all for things I found pointless” (Prince-Hughes 2002, p. 10). Finally, Dawn, a former student with Asperger’s adds: “I could talk to people very well and even become very enthusiastic about interacting socially if it revolved around my areas of interest” (Prince-Hughes 2002, p. 118). Thus, including special interest emerge as a potential way of tapping into the strength of students, which can greatly contribute to their inclusion in higher education.

### **Existing examples of special interests in students**

Welkowitz and Baker (2005) briefly describe the special interests of three college students with Asperger’s. Arnold is a 22 year old geography major with a special interest in geography.

Gaby is a 20 year old student who has special interest and ability in computer science as well as in art and graphic design. Sophie is a 21 year old history major who has special interest in economic analyses of pre-war Germany.

Much more comprehensive is the example of Susan (Prince-Hughes 2002, p. 91-105), who as a thirty year old graduate student in linguistics looks back at her experiences with her special interest in letters and written language. Susan's interest in letters goes back to early childhood. "My mother tells me that my favourite 'toy' at age 3 was the dictionary, and I would spend hours each day pouring through its pages. One of the first things that attracted me was the shape of the letters. There were straight lines, curves and dots." In eight grade Susan became interested in the genealogies in the Bible book Genesis and researched the etymology of the occurring names. In high-school this interest in etymology "evolved into an obsession with linguistics" and she "spent many high school recesses and afternoons in the school library pouring through dictionaries". When she started college, she knew from the first semester that she wanted to pursue linguistics as a career, focussing on non-standard varieties of English in the 19<sup>th</sup> and 20<sup>th</sup> century. For six years, she "exhaustively looked through the criminal court records at the State Archives, old newspapers on microfilm, school newspapers and yearbooks, diaries – almost any available text". She painstakingly developed a large database with attestations of non-standard speech. This special interest developed into "highly innovative and original research" and led to several publications. Reflecting on her special interest, Susan observes that, on the one hand, her special interest in words has taken a lot of time, but on the other hand, it has kept her motivated to find the needles of non-standard speech in the haystack of archives.

Susan's is the only comprehensive narration of the special interests of an student with autism at the college/university level the author has found in the academic literature. To remedy this, the next section will offer a description of the author's own special interests. The autobiographical narrative will start with describing the authors' special interests, followed by a discussion of his problems and success, and how they were influenced by arrangements at his university.

### **A new example of special interests in a Master's student**

As a student enrolled in a two-years Research Master in Philosophy, the author always had up to six special interests. These interests were certainly not in the domain of 'folk physics' but drew widely from the humanities and social sciences – without any regard for disciplinary boundaries. Many interests revolved around concepts (dialectics, citizenship, framing,

attention, blending, embodiment, literacy, public religion, transmedia, incarnation, Umwelt etc.), and these concept-interests would last a few weeks to a few months, after which his interest shifted to another concept. Other interests revolved around scholars (Hannah Arendt, Jeffrey Alexander, Gilles Fauconnier, etc.) or around wider disciplines (political philosophy, cognitive linguistics, cultural sociology, etc.) and, if they did not die out after a week or so, these discipline-interests would last for several years.

The author pursued these interests almost daily, spending up to 6 hours on one or more interests every day. This pursuit involved seemingly ordinary academic activities such as searching online for publications, reading papers and books, going to the library, copying book chapters, and writing. However, the manner in which they were pursued was not ordinary: he would amass excessive bibliographies, he would work hours on paragraphs that never crystallized into full papers, and he would print articles and borrow books on an usual variety of subjects. Both reading and writing so captivated him that he completely shut out all perception, not only of his surroundings but also of his bodily states. Hunger and muscle pain remained unnoticed and he had great difficulty in switching to another kind of activity, especially relaxation.

Academic papers, and later his Master's Thesis, posed a special kind of challenge. Rather than starting with a problem, or a research question, he would start from a special interest, and try to work that interest in the assignment. However, he was expected to present his research as a rational answer to a problem or question. This took much effort and many attempts to come up with a story to legitimize what was really just a fascination out of nowhere. On the one hand, teachers would appreciate his thoroughness and determination in trying to understand all there is to understand about a concept-interest, scholar-interest or discipline-interest. On the other hand, teachers would complain that he should be more pragmatic in his pursuit and presentation of his research.

The transition from coursework to his Master's Thesis presented a major problem, and it would eventually take him seven years to finish his thesis. He was not yet diagnosed with autism at the time, and therefore did not use the special provisions for students with autism offered by the university. With hindsight, he might have benefited from the recommendations offered below, but overall the coursework was attainable, as the assignments were well-structured, divided into sub tasks, and limited in time.

Initially, his main difficulty was delineating and focussing his research, and developing a single coherent and centred argument. The author had to postpone his Master's Thesis after a year because of a burnout – not only due to academic demands, but mostly due to demands in the



personal sphere. His teachers would not understand why he could not easily finish his Master's Thesis, because on the level of sections his work was of a high standard. He developed acute psychiatric problems, which for a period of two years made it impossible to do any work at his thesis. After this period, he contacted one of his professors, who believed in him, and was willing to give him a chance at finishing his Master's. This was the first time he contacted a student dean, who organized for him to receive the necessary financial exemptions to be able to continue his studies. During that time he was easily disoriented by literature searches, had difficulty setting up a coherent argument even at the paragraph level, and worked on seven special interests simultaneously without a sense of how they would fit into a thesis. Other than financial provisions, he did not receive any special assistance, and only met with his professor every three months.

In the end, the author came up with his own adjustments. He was allowed to write his Master's Thesis completely in question and answer form, which helped him to get a sense of his intended audience by explicitly representing them in the form of an (imagined) interlocutor. He was also allowed to finish his thesis in his own pace, and to preserve the credits for his coursework. The final thesis (Boven 2014) was an attempt to bring seven special interests together within a single narrative. Although his thesis was marked with an 8 (out of 10), and he graduated cum laude, the critique of other professors on his methodology and relevance was severe, and discouraged him to continue his studies. It would take him two years to work up the courage to submit a Ph.D. proposal – to the Psychology rather than the Philosophy department.

In addition to a Master's thesis, the author had to finish a Reading, which normally involves a discussion of a substantial literature list. After several attempts, he proved unable to complete this assignment in its original form. Because he had experienced some success with visualizing rather than narrating his research, he came up with the idea to present his findings in the form of an exhibition about *The Republic*, one of the dialogues of Plato – which had been one of his special interest for over five years. His professor kindly allowed for it, although this form was very unorthodox and without any precedent. The author developed several large-size infographics, as well as an audio tour, and some three-dimensional displays – which were shown to a public of high school and higher education students of about 200 persons in total. Instead of the standard research paper, the author submitted a process report of conceiving, developing, and evaluating the exhibition. Together with the now completed Master's Thesis this sufficed to complete his Research Master's in Philosophy. Not much later he was diagnosed with Asperger's.

### **Floating and grounded interests**

In the view of the author, the defining feature of special interests is not their atypical *topic* (which can be more unusual, inappropriate, restricted, unsuitable or fixed) or the *manner* in which they are pursued (which is often more intense, and less social). These two secondary attributes stem from a single primary feature: a person with autism is intrinsically motivated to pursue the interest, and experiences the interest as an end in itself, not necessarily as grounded within social or practical contexts. Special interests are like hovercrafts that float without any support from the ground - special interests are *floating interests*. They are important to the person in their own right and not because he or she gains anything from them, be it status, money, credits, praise or simply the solution to a problem. It is because persons with autism tend not to use their social and functional context as a constraint on what they find relevant and valuable that their interests may appear quaint, intense and 'useless'. By contrast, the interests of so-called 'neurotypicals' tend to be *grounded* interests: extrinsically motivated and embedded within social and practical contexts.

The pursuit of knowledge as an end in itself is an ancient Western ideal, already championed by Aristotle, who divorced theoretical from practical knowledge, compared it to the passive gazing (*theorein*) of the spectator, and developed a rhetoric of uselessness as being free from practical demands (Nightingale, 2004). However, this is far from how learning is defined in contemporary Western universities. Today, university students are expected to learn how to solve wider scientific or societal problems, to develop an academic or professional identity grounded in shared practices, and to develop a strategy to monetize their knowledge. Students with autism today face the same crisis as Plato's student Glaucon: they are challenged to combine a love for detours through 'theoretical' (in the sense of 'useless') knowledge with a willingness to return to the practical realities of the wider community – unwelcoming as it may be (Altman, 2013). Only, for the person with autism this descent does not involve a return but the homecoming of a stranger born in exile.

For students with special interest, grounding them is not a given, but must be achieved arduously and painstakingly. This makes the transition from coursework to more substantive research challenging for students with autism, in spite of their strong intrinsic motivation to learn. In the eyes of their peers and teachers alike it will not do to study (for example) 'attention' because it interests the student, he must show that it is relevant to do so, e.g. by showing how his research fills a gap or problematizes assumptions. Isolated topics that interest the student *for no reason* must be girded with legitimizations that are alien to it. This process should not be mistaken with the conventional process of understanding relevance. In grounded interests, relevance is added from the outside, whereas in grounded interests it already belong to the topic of interest and is 'merely' explicated.

To complicate matters, the interests of students with autism can be partly floating and partly grounded. Not all special interests are special to the same extent: some will involve extrinsic as well as intrinsic motivation. This leaves the student with autism with the difficult task of sorting out the difference.

### **Special interests and inclusion of students with autism**

If special interests are indeed driven by an intrinsic motivation, which is less flexible and less embedded within practical contexts, this may have positive and negative effects on the inclusion of students with autism in higher education.

On the positive side, special interests may allow students with autism to complete tasks other students find too tedious and lead their research into unexpected and innovate directions, questioning assumptions usually taken for granted.

On the negative side, special interests can disable students with autism (even if autism is not simply a disability but rather a 'difference') by interfering with their learning. In the context of discovery, special interests make it more difficult for students with autism to complete tasks that they are not interested in. Consequently, success at university may require greater effort on their part, or may not be achieved at all. In the context of justification, a reduced awareness of the relevant contexts of their special interest(s) may make it more difficult for students with autism to legitimize their work, or it may feel inauthentic to them to do so.

If special interests can have the negative effect of partly disabling students with autism, avoiding or overcoming this is not the sole responsibility of the student. Performing tasks outside your own interest, or adhering to norms shared in disciplinary practices, are not necessarily (and have not always been) part of the academic enterprise, but depend on political choices and the historical development of social institutions. Educators, and universities at large, therefore have to take part of the responsibility if academic practices effectively (even if unintentionally) exclude students with autism who have a different structure of motivation but are otherwise good students. This requires special provisions, as we will see in the next section.

### **Recommendations for university teachers**

To make academic learning more inclusive to students with autism who have special interests, the author recommends a number of accommodations. For some students they may require extra supervision, in which a case it may be necessary to for them see a counsellor, but for other students it should be enough to change the content (not the quantity) of the supervision.

1. Students with autism (who are open to this) should be encouraged to include their special interest in assignments. For example, although 'incarnation' is a Christian theological concept, the author could have included this special interest within a history of psychology assignment by studying how Christian psychologists have used this concept to develop or criticize psychological theories. Similarly, the author's special interest in the French philosopher Paul Ricoeur could easily be turned psychological by focussing on his philosophical appropriation of psychoanalysis. This requires that university teachers bear with their students with autism rather than immediately dismiss their ideas as irrelevant.
2. Students with autism may need assistance in reconciling their special interest(s) with the assignment. This should not involve watering down the requirement, or making the subject of the assignment fall outside the field in which the student seeks education. Rather, professors should use their more comprehensive knowledge of their field and of academic practice in general to help the student to identify connections between his special interest and the task at hand. Beyond this, the student may benefit from extra guidance from a counsellor in coming up with an effective and efficient search strategy that will prevent him or her from getting lost in the associative process of internet searches; it will help to agree upon a limit for each searching period, and to insist on regular breaks.
3. When encouraging students with autism to ground their special interests, teacher should make any questions they have about the *relevance* of their students' work explicit and specific rather than expecting that their students will read this critique between the lines of what is actually said. It is first of all to the student to forge a narrative that explains to others the academic and societal relevance of his work. In students with autism this process will likely not move from an intuitive to an explicit understanding of relevance, but rather the other way around: the relevance must first be made explicit and only then it can become intuitive, or if that is unattainable, become a deliberate principle. This requires not so much an exploration of students their ideas, but rather a precise explication of the kind of relevance they should identify. Students should be encouraged to provide such an explanation. "I am

expected to make clear how my paper may benefit university teachers who currently have (or may have in the future) one or more students with autism, and through their assistance, students with autism who have special interests.”

4. Including a special interest within an assignment helps students with their motivation, but this has as a danger that it will interfere with their everyday functioning. Students with autism may need assistance in overseeing the practical implications of an assignment, especially if it is unstructured and undivided into smaller tasks. Teachers can help them make explicit the time, resources and effort a task involves. If a student comes up with a reading list of 15 papers, it helps to ask them how many time it costs them on average to read a paper, how many time that is in total, how they can fit this time into their schedule, and what they will have to give up in order to achieve the goal they have set.
5. Because special interests are floating interests they are not automatically embedded within relational contexts. Students with autism may therefore need assistance in identifying and understanding the intended audience of their work, and the (implicit) norms by which they will judged their work. It can help to make the questions and assumptions of potential readers explicit by (temporarily) including them explicitly it in the text.
6. Special interests are inherently limitless. When you research a question, you can stop when you have found an answer. In contrast, the search for information about a special interest is not spontaneously limited by a problem, an intended audience, or a drop in motivation. There is always more to know and more to understand. It thus helps to ask students with autism beforehand what would be a good satisfaction point. “The assignment is done when I...”
7. When students with autism try to include special interests in their work the process and content of their work may initially fail to install much confidence in teachers. One of the deciding factors in success is a teacher who nonetheless believes in the student and trusts in him to work through his challenges, and tap into his strengths – even if this takes a lot of time.
8. Because students with autism are motivated differently and think differently assignments that work for other students may not be suitable for them. It helps to allow students to be creative in adapting assignments to their special needs, even if this leads to unorthodox solutions which may not easily fit within exam regulations.

## **Conclusion**

Attending to special interests in academic learning can contribute to the inclusion of students with autism in higher education by tapping into one of their strengths: a strong and persistent motivation to get to the bottom of a specific topic. By sharing their story students with autism can contribute to a better understanding of their unique challenges and strengths. Based on a concrete example of academic learning with special interests specific adjustments have been proposed that can help university teachers to support students with autism. These adjustments could also be useful for other students, but they are a necessity for students with autism who - due to a partially disabling condition - cannot otherwise obtain a university degree and reap the many benefits of higher education.

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